

needles have been disturbed before or at the time of large earthquakes. Speaking generally about these investigations, Baron Kikuchi considers that they promise to throw light upon the state of underground stress, and as one of the chief objects of the E. I. C. is to devise means to predict earthquakes which may be taken as announcements that stress has been relieved, it will be recognised that the inquiries relating to local magnetic disturbance are of a promising nature.

Other phenomena which receive attention are variations in latitude, the determination of gravity, underground temperatures, *seiches*, changes in the level of water in wells, and the elastic constants of rocks.

The last section of this interesting volume is an account of investigations which have been made with the object of reducing the disastrous effects of earthquakes to a minimum. To the practical person this is no doubt the most important branch of all seismological research. Already it has accomplished much, and after a severe shaking we have learned that in Japan new types of structures are to be seen standing amongst the ruins of older types.

We welcome Baron Kikuchi's volume, and trust that although its circulation is private it may also be wide.

THE FOUNDER OF AUSTRALIAN ANTHROPOLOGY.¹

DR. A. W. HOWITT is our highest authority on the native tribes of Australia. Ever since the publication of "Kamilaroi and Kurnai," in 1880, he has been adding to our knowledge of the most instructive and interesting aboriginal population in the world. The present work, therefore, which summarises the data collected by him during forty years of personal intercourse with the "blackfellows," is of the greatest importance. Most of the material here incorporated was written up before 1889; a few modifications of theory and many new facts have been introduced, and some corrections made, but the broad deductions remain unaltered.

The main body of the work is preceded by a useful summary and criticism of the principal views that have been put forward as to the origin and ethnological affinities of the Tasmanian-Australian stock; Dr. Howitt rejects both the Dravidian and the Malayan hypotheses. The tribes here dealt with came into contact with the white man at a date too early, perhaps, to allow them much chance of survival; many of them are now practically extinct, and most of them are at least deorganised. The area they occupied is about one-quarter of the continent, extending on the north to near the tropic of Capricorn, and on the south bordered by the Southern and Pacific Oceans, connected by Bass Strait. This area has a wide range of climate and temperature, and the tribes themselves present almost every variety of social organisation, from that of the Dieri and central districts through the ordinary Australian types to the unique system of the Kurnai in Gippsland. Excellent

maps, very numerous and complete, illustrate both the tribal areas and the range of the various social systems.

In this matter of organisation Dr. Howitt traces the gradations in a way conclusive enough to point to the probable course of evolution. In particular he reduces the problem of exogamy to the bisection of the community into two exogamous intermarrying moieties—the typical Australian system—which bisection is based, as he implies, on the prohibition of marriage between brothers and sisters. It is to be regretted that he does not fully discuss this ground of exogamy. He quotes Dr. Frazer and the present writer as having independently reached the same conclusion, and it seems that we are at last approaching unanimity as to this primal law of human social relations. He

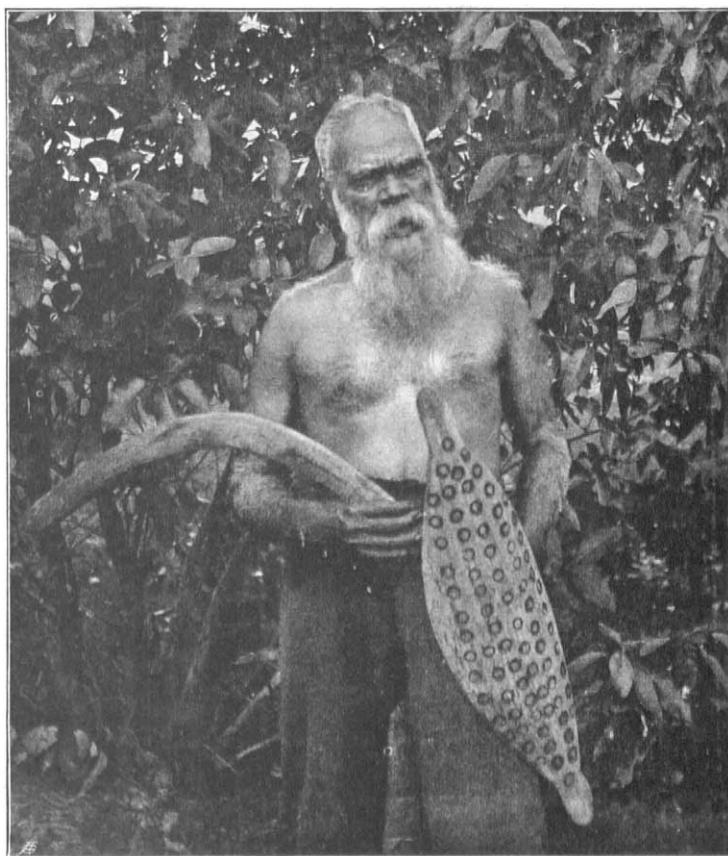


FIG. 1.—One of the Krauatungalung Clan of the Kurnai Tribe. From Howitt's "The Native Tribes of South-East Australia."

agrees with Spencer and Gillen that the primary functions of totemism were in existence before exogamy became established, and that the relation between totemism and exogamy is secondary only. On the other hand he sees no reason to modify his original view that the bisection was a reformatory measure, instituted after a long reign of the "Undivided Commune." It is doubtless impossible to deny some purposiveness to the innovation, if innovation it was; Mr. Lang is here inclined to agree. But to engineer such bisection in a large undivided commune seems beyond the powers even of primitive man. A shorter way may be easily suggested:—the moieties practically correspond to two groups of intermarrying relatives; we may suppose, then, to begin with, two small families or fire circles, A and B, making inter-

¹ "The Native Tribes of South-East Australia." By A. W. Howitt, D.Sc. Pp. xix+879; illustrations and maps. (London: Macmillan and Co., Ltd., 1904.) Price 21s. net.

marriage, and continuing to do so in successive generations. Now here we have in A and B not only the two moieties of the future tribe, but the tribe itself, in the making. The bisection grew out of a quasi-purposive exogamous instinct against marriage within the fire-circle.

There seems to be nothing against Aristotle's view that the tribe grew out of the family, except the curious but fashionable prejudice in favour of an organisation for primitive man of the baboon type. Mr. Atkinson in a remarkable paper has dealt the latest and one of the shrewdest blows at this prejudice, and doubtless anthropologists may in time revert to Darwin's suggestion that the earliest form of the human family resembled rather that of the unsocial anthropoids, such as the gorilla. It is noteworthy that Dr. Howitt modifies considerably the earlier conception of the Undivided Commune, and regards it as having been originally something like "what occurs when the modified Communes of the Lake Eyre tribes reunite." The battleground of the two schools is, of



FIG. 2.—The Bret or Dead Hand. From Howitt's "The Native Tribes of South-East Australia."

course, the so-called group-marriage of the tribes last named. In this connection the author does good service by putting together a full and revised account of the Dieri marriage-system, with its *Tippa-malku* or individual marriage, and its *Pirrauru* or group-union. We are thus enabled with some certainty of data to compare the notorious Urabunna and Arunta systems. But when Dr. Howitt says, "the germ of individual marriage may be seen in the Dieri practice; for as I shall show later on, a woman becomes a *Tippa-malku* wife before she becomes a *Pirrauru* or group-wife" (p. 179), the logic strikes one as curious. The inference should surely be that the group-marriage has been evolved from the individual system, and not the other way about.

The author still regards the practice, as amongst the Wiimbaio, of exchanging wives on the approach of a pestilence, as a survival of group-marriage, and the right of access as a survival of the *jus primæ noctis* and an "expiation" for individual marriage. One had thought that these two last categories had been relegated to the limbo of outworn fictions anthro-

pological. Noticeable details are that the action of jealousy is very strong in the Dieri tribe; that, as the Rev. O. Siebert puts it, "the practice of *Pirrauru* is worthy of praise for its strength and earnestness in regard to morality, and in the ceremonial with which it is regulated, since no practice could be less in accord with the hetairism which Lord Avebury has imagined for the Australian aborigines" (p. 186).

It is disappointing to find that no mention is made of Cunow's theory of the four and eight subclasses; it would have been instructive to see what light an unrivalled personal knowledge of the system and an acquaintance, doubtless extensive, with the dialects might have thrown on the view that these classes are age-divisions, and have primarily nothing to do with marriage-restrictions. The Kurnai with their totems which do not affect marriage, and their local, not class-divisions, present a fascinating problem, and no one knows more about the Kurnai than does Dr. Howitt. Their marriage by elopement, and the systematic use therein of priestly assistance, are remarkable customs. "It was the business of the *Bunjil-yenjin* to aid the elopement of young couples. For instance, when a young man wanted a wife, and had fixed his mind on some girl, whom he could not obtain from her parents, he must either go without her, persuade her to run off with him, or call in the aid of the *Bunjil-yenjin*. In the latter case his services were retained by presents of weapons, skin-rugs, or other articles." The *Bunjil-yenjin* then sang a magic song until he thought his magic strong enough to secure the "covering up" of the parents in a state of coma.

The author in a very interesting essay applies the facts of "maternal descent" to the Teutonic Salic Laws. Among the more important features of the book is the masterly and final settlement of the vexed questions of the native headmen, and the belief in supreme beings, like *Daramulun*. The connection between the two questions is that the headman in the sky is the analogue of the headman of the tribe on the earth. Among the Kurnai—to note another difference between many of the south-eastern tribes and those studied by Spencer and Gillen—the knowledge of *Mungan-ngaua* is confined to the initiated men, who impart it in all sincerity to their novices; the Arunta, as Spencer and Gillen inform us, take this opportunity of explaining their deity away as a being only believed in by women and children. Among further details of interest are the Kurnai custom of the Dead Hand, the performance of the Indian Rope Trick by Kurnai medicine-men, the magical influence which exists between opposite sexes, and the belief that the initiated elders infuse their own magical power into boys at confirmation.

The book is a fitting crown to Dr. Howitt's labours, and is, in effect, the most considerable and important of all studies of the Australian race.

A. ERNEST CRAWLEY.

CHANGES UPON THE MOON'S SURFACE.

UNTIL within the last few years there has been a very general opinion that the moon was a cold, dead world, or, as it has been sometimes expressed, a burned out cinder, upon which nothing ever happened. This view was apparently due to the fact that the men who wrote the text-books on astronomy were not the men who studied the moon. Among the selenographers themselves, those astronomers who made a special study of the moon, there is not one, so far as the writer is aware, who has not expressed his belief that changes of some sort, volcanic or otherwise, occasionally occur upon our satellite. Reference